

REMARKS

In response to the Office Action dated April 18, 2003, Applicant respectfully requests reconsideration. The application is believed to be in allowable condition.

Claims 17-34 stand rejected under 35 U.S.C. 112, first paragraph, for containing the term "electronic substrate" which is not properly described in the specification. To overcome this rejection, claims 17, 24, 25, and 27 have been amended to replace the improperly described term. Claims 18-23, 26, and 28-34 depend, directly or indirectly, from one of claims 17, 24, and 27, and are patentable for at least the same reasons. As the 35 U.S.C. 112, first paragraph, rejections of claims 18, 20, and 23-34 have been overcome, claims 18, 20, and 23-34 are now in allowable condition.

Claims 17, 21 and 22 stand rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,345,061 (Chanasyk). As discussed below, independent claim 17 is patentable over the cited reference.

Chanasyk discloses a solder reflow oven for soldering surface mount devices to printed circuit boards using convection and infrared radiation. A reflow oven is designed to produce heat sufficient to melt solder paste on the circuit board, usually in a temperature zone exceeding 200 degrees Celsius. The apparatus includes a heat zone having an upper heater cell and a lower heater cell respective to the conveyor by which the printed circuit boards are transported, such that both the upper and lower surfaces of the circuit board are heated in the heat zone. Each heater cell includes a fan for moving air through perforations formed in heating plates in a direction toward the circuit boards. The air is heated as it passed through the heating plates.

Claim 17 is directed to a system for heating a circuit board. The system includes a support for supporting the circuit board in a working position and a heater mounted for heating one side of the circuit board. The system further includes a first hollow elongated tube mounted so that the heater is between the circuit board and the first tube, the first tube having a plurality of holes oriented so that when a gas is introduced into the first tube, the gas is directed through the holes, past the heater, and toward the circuit board.

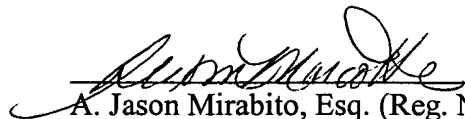
Chanasyk does not teach or suggest a heating system as is recited in claim 17. In particular, Chanasyk does not discuss a first hollow elongated tube mounted so that a heater is between the first tube and a circuit board. Nor does Chanasyk discuss a tube having a plurality of holes such that when a gas is introduced into the first tube, the gas is directed through the

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holes, past the heater, and toward the circuit board, as is recited in claim 17. Further, Chanasyk does not discuss a heater mounted for heating one side of a circuit board, also recited in claim 17. Thus, claim 17 is patentable over Chanasyk. Claims 21 and 22 depend directly from claim 17 and are patentable for at least the reasons that claim 17 is patentable.

The application as presented is believed to be in allowable condition, and Applicant respectfully requests a favorable examination. To answer any questions, or otherwise further the prosecution of this application, the Examiner may contact the undersigned attorney at the number provided below.

Respectfully submitted,


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